

Production of aqueous sols of hydrous oxides

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Inventor:
Applicant: NAT ALUMINATE CORP
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Abstract of GB609216

An aqueous electrolyte-free sol of a hydrous oxide is produced by passing an aqueous solution of a metal salt through an anion-exchange material. Aluminium, iron, cobalt, nickel, chromium and manganese salts are specified. The exchange-materials such as synthetic resins of the metaphenylene-diamine-formaldehyde type, are preferably freshly made or suitably regenerated by means of alkali. Gelation may be prevented by adding small amounts of organic colloidal stabilizers or a salt from which the sol was derived. The Specification as open to inspection under Sect. 91 comprises also the abstraction of an anion from a solution of any material capable of forming a sol. This subject-matter does not appear in the Specification as accepted.

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Claims of GB609216

1. The process of producing an aqueous sol of hydrous oxide which comprises passing an aqueous solution of a salt of an element capable of forming such an oxide through a mass of anion-exchange material whereby the anion of said salt will be abstracted and a sol of the hydrous oxide results.
2. The process according to claim 1, for producing an aqueous sol of aluminum hydrate, wherein said salt is an aluminum salt.
3. The process according to claim 1, for producing an aqueous sol of iron hydroxide, wherein said salt is an iron salt.
4. The process according to claim 1, for producing an aqueous sol of cobalt hydroxide, wherein said salt is a cobalt salt.
5. The process according to any one of the preceding claims, wherein said aqueous salt solution is contacted with an alkali regenerated mass of the anion-exchange material.
6. The process according to claim 1, for producing an aqueous sol of a hydrous oxide from a salt capable of forming said hydrous oxide upon hydrolyzation thereof, wherein said salt is hydrolyzed by dissolving the same in a sufficient quantity of water, and abstracting the anions from the resulting colloidal solution by means of ion-exchange.
7. The process according to claim 6, for producing an aqueous sol of ferric hydroxide.
wherein said salt is a ferric salt.
8. The process according to claim 1, for producing an aqueous sol of chromium hydroxide, wherein said salt is a chromium salt.
9. The process according to claim 7, wherein the salt is ferric chloride which forms an electrolyte-containing ferric hydroxide sol and the said anion-exchange material removes the simultaneously formed free hydrochloric acid therefrom.
10. The process according to claim 1 wherein said salt solution is of a trivalent metal.
11. An aqueous sol of a hydrous oxide when prepared or produced by the process according to any of the preceding claims.

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